

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee Name: CYANCO
P. O. Box 1999
5505 CYANCO Drive
Winnemucca, NV 89445

Permit Number: NEV89024

Location CYANCO Production Facility
Township 35N, Range 37E, Section 6
7 Miles Southwest of Winnemucca, Humboldt County, Nevada
Latitude 40° 56' 30" N
Longitude 117° 52" 00" W

Well Head Protection

The facility is not within a 2-, 5-, or 10-year well-head protection program capture zone. The facility is not within the 7000-foot buffer zone for any public water supply well.

General:

The applicant seeks renewal and modification to include additional monitoring wells of permit #NEV89024, which was originally issued in February 1990. The applicant operates a sodium cyanide manufacturing plant that produces a liquid sodium cyanide product with a nominal concentration of 30 percent sodium cyanide. The process involves the reaction of methane (natural gas) and ammonia at an elevated temperature (1050° C). The reaction products are then sent to a scrubber where they are absorbed into a caustic soda solution as sodium cyanide. On-site above ground tanks and rail cars store liquid ammonia, 50% caustic soda solution and the liquid sodium cyanide product. Any product that does not meet specifications is recycled. Storage tanks or rail cars containing hazardous chemicals are contained within secondary containment with the capacity to contain 1 1/2 times the contents of the largest tank should a spill occur. The containment area is constructed with leak detection, and drains to a concrete sump that is periodically inspected for fluid accumulation. All fluid that incidentally enters containment is either evaporated within containment or is returned to the process. Permit NEV89024 is a zero discharge permit.

Receiving Water Characteristics:

The facility is outside the 100-year flood plain and over one mile from the Humboldt River. Depth to ground water at the site is approximately 61 feet. Water used in the process is pumped from two on-site wells, W-0000 and W-0010. Ground water quality meets most primary drinking water standards for inorganic elements and compounds. Arsenic, at 0.031 mg/l, exceeds the U. S. EPA primary drinking water standard of 0.01 mg/l.

Flow:

No discharges are authorized by this permit. Stormwater is contained within the fenced process area and is disposed of by consuming it in the cyanide manufacturing process or evaporating it within the lined containment area.

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to operate, subject to the conditions contained within the permit, is being sent to the **Humboldt Sun** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit may do so in writing for a period of 30 days following the date of the public notice.

All comments regarding this permit must be received or postmarked by **5:00 PM on April 21, 2005**. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determined to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination

The Division has made the tentative determination to reissue the proposed permit. The Division does not intend change the current permit to allow the use of non-contact cooling water for agricultural use.

Proposed Effluent Limitations, Special Conditions, and Schedule of Compliance

GROUNDWATER MONITORING:

The two monitoring wells, MW-1 and MW-2 shall be monitored as in the table below.

Parameter	Permit Limit	Frequency	Sample Type
Depth to Groundwater (ft)	Monitor & Report	Quarterly	Discrete
Groundwater Elevation (ft AMSL)	Monitor & Report	Quarterly	Calculate
Ammonia as N (mg/l)	Monitor & Report	Quarterly	Discrete
Chloride (mg/l)	Monitor & Report	Quarterly	Discrete
Total Nitrogen (mg/l)	10.0	Quarterly	Discrete
pH (Standard Units)	Monitor & Report	Quarterly	Discrete
Sulfate (mg/l)	Monitor & Report	Quarterly	Discrete
TDS (mg/l)	Monitor & Report	Quarterly	Discrete
Total Cyanide (mg/l)	0.20	Quarterly	Discrete

The production water wells, W-000 and w-0010 shall be monitored as in the table below.

Parameter	Permit Limit	Frequency	Sample Type
Ammonia as N (mg/l)	Monitor & Report	Quarterly	Discrete
Chloride (mg/l)	Monitor & Report	Quarterly	Discrete
Nitrate as N (mg/l)	Monitor & Report	Quarterly	Discrete
pH (Standard Units)	Monitor & Report	Quarterly	Discrete
Sulfate (mg/l)	Monitor & Report	Quarterly	Discrete
TDS (mg/l)	Monitor & Report	Quarterly	Discrete
Total Cyanide (mg/l)	0.20	Quarterly	Discrete

Special Conditions

If cyanide is detected at any concentration in any of the monitoring samples the Bureau of Water Pollution Control shall be notified by the end of the first business day following the detection of cyanide. The detection limit for Cyanide shall be no higher than 0.1 mg/l.

Schedule of Compliance

- a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.
- b. The Permittee shall implement measures to ensure current and future monitoring wells are not impacted by onsite crop and landscaping irrigation practices.
- c. By **June 1, 2005**, the Permittee shall submit a report on the geohydrology of the facility site and a plan for additional monitoring wells, addressing the following items.
 - i. Assess the siting and installation of a system of monitor wells to be used for water level measurements, to track water levels and groundwater flow under various pumping and injection scenarios associated with activities permitted under Underground Injection Control (UIC) permit UNEV89061.
 - ii. Plan the siting and installation of any monitoring wells, in addition to the proposed monitoring well near the Primary Production Well, which will yield water quality data for the aquifer upgradient of the plant site under various pumping/injection scenarios under UIC permit UNEV89061.
 - iii. Provide monitor well design for Division review and approval prior to well drilling and completion.
 - iv. Perform a Meteoric Water Mobility Procedure (MWMP) on native soil native at the CYANCO site that has not previously been irrigated to assess the mobility of the various salts that may be present. This test procedure should be performed by a Nevada State certified laboratory.

Rationale for Permit Requirements

The design of this facility meets the State's zero discharge standard of performance. No discharge of fluids or wastes is allowed at the facility. Storage tanks or rail cars containing hazardous chemicals are required to be contained on an impermeable surface or on trestles and within a bermed area with the capacity to contain 1 1/2 times the contents of the tanks should a spill occur. Ground water monitoring is required to confirm that contaminants have not entered the waters of the State.

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